

S/N 10/048,040

product from BuBr and PhBr and Na in hot C₆H₆, b₇₆₇ 181.2°, d₄₂₀ 0.8597, n_{C20} 1.48554, n_{D20} 1.48988, n_{F20} 1.49928, was obtained in 50% yield), and 35% 2-phenylthiophene, b₃ 80-105° (crude), pure, m. 34.0-4.5°, b₇₆₀ 256.1°, d₄₃₅ 1.1215, n_{C35} 1.6228, n_{D35} 1.6320, n_{F35} 1.6553 (from 85% EtOH); HgCl₂ complex, m. 235-6° (decomposition). PhCH₂MgCl and allyl bromide gave 58.4% 1-phenyl-3-butene, b₇₆₃ 176-8° (crude), pure, b_{763.5} 177.5°, d₄₂₀ 0.8834, n_{C20} 1.50344, n_{D20} 1.50792, n_{F20} 1.51920. This (24.6 g.) and 19.3 g. S heated 4 h. to 200-70° gave, after repeated distillation and shaking out with Hg, 14.4% 2-phenylthiophene, and a small amount of an unanalyzed product, m. 288-9°, poorly soluble in organic solvents. Repetition at 220-30° for 8 h. gave a small amount of MePh, 2-phenylthiophene, and the high-melting substance above. For best results the hydrocarbon (66 g.) is heated with 48.5 g. S 20 h. at 220-50° (final temperature), then steam-distilled, and the distillate extracted with CHCl₃, yielding 25.8% 2-phenylthiophene and a small amount of the product, m. 289°. 1-Phenyl-1,3-butadiene [35% by dehydration of PhCH:CHCH(OH)Me by distillation with iodine], b. 67-78° (cis-trans mixture), separated by distillation into the trans-isomer, b₄ 69.2°, d₄₂₀ 0.9338, n_{D20} 1.60852, and the cis-isomer, b₃ 76.9°, d₄₂₀ 0.9334, n_{D20} 1.60948; heating with S (190° initially, when a spontaneous reaction raises the temperature to 250°) 1 h. at 225° gave 8.3% 2-phenylthiophene and some phenylbutadiene polymers. The diene reduced by Na-EtOH gave 1-phenyl-2-butene, b₇₅₈ 177-8°, d₄₂₀ 0.8861, n_{C20} 1.50779, n_{C20} 1.50328, n_{F20} 1.51901, which (11.9 g.) with 8.6 g. S after 6 h. at 212-17° gave 15.3% crude 2-phenylthiophene. This (5.1%) also resulted from BuPh and S after 35 h. at 195-200°.

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L2 226 SEA ABB=ON PLU=ON POLYMER?(S) ((THIOALKYL OR THIOMETHYL OR
THIOBUTYL OR PHENYLTHIO?) (2A) (THIOPHEN? OR BIPHENYL? OR
PHENYL?))
L3 63 SEA ABB=ON PLU=ON POLYMER?(8A) ((THIOALKYL OR THIOMETHYL OR
THIOBUTYL OR PHENYLTHIO?) (2A) (THIOPHEN? OR BIPHENYL? OR
PHENYL?))
D L3 1-20 IBIB ABS
D L3 21-40 IBIB ABS
D L3 41-63 IBIB ABS

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FILE USPATFULL
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